ifm electronic

CE

Operating instructions
(Safety-related part ATEX)
Inductive NAMUR sensors

UK

NS**

706251 / 00 02 / 2012

Information on the safe use in hazardous areas

Functions and features

- Use in hazardous areas according to the classification
  II 1G (group II, category 1G, apparatus for gas atmosphere).
  The requirements of the standards EN 60079-0:2009, EN 60079-11:2012, EN 60079-26:2007+Corr2009 are met.

  II 2G (group II, category 2G, apparatus for gas atmosphere).
  The requirements of the standards EN 60079-0:2009, EN 60079-11:2012 are met.
  EC type test certificate

  PTB 02 ATEX 2217

- Use in hazardous areas according to the classification
  II 1D (group II, category 1D, apparatus for dust atmosphere).
  The requirements of the standards EN 60079-0:2009, EN 60079-11:2012 are met.
  EC type test certificate

  BVS 04 ATEX E153

- Marking

Ex II 1G Ex ia IIB T6 Ga Ex II 1D Ex ia IIIC T 90°C Da	Type NS****
Ex II 2G Ex ia IIC T6 Ga Ex II 1D Ex ia IIIC T 90°C Da Ta max = 70°C	Type NS****

Installation / Set-up

The units must only be installed, connected and set up by qualified staff. The qualified staff must have knowledge of protection classes, regulations and provisions for apparatus in hazardous areas.
Check whether the classification (see „Marking“ above and marking on the unit) is suitable for the application.

- Connection only to intrinsically safe certified circuits or evaluation amplifiers which do not exceed the following maximum values of the units:

  Ui = 15 V, Ii = 50 mA, Pi = 120 mW

- Permissible operating temperature of the application (referred to the maximum permissible power of 120 mW):

-20...+70°C	1G	IIB	T6
-20...+70°C	2G	IIC	T6

-20...+70°C	1D		90°C

- Maximum effective internal inductance (Li) and capacitance (Ci):
  The values apply to potted cables.

Article no.	Cable length	Internal inductance (total) in µH	Internal capacitance (total) in nF
NS5003	2 m	110	80
NS5009	0,1 m	110	80
NS****)	xx m	*1)	*2)

Articles with cable/units with cable
NS****) For variants of cable units with potted cables of a different length the values of the cable must be taken into account. The values (calculation formula) apply to potted cables of up to 50 m length.
0.6 µH (Li) / 140 pF (Ci) per metre of potted cable.
*1) Thus the maximum effective internal inductance of the unit results in:
Li = 110 µH + cable length in (m) X 0.6 µH
*2) Thus the maximum effective internal capacitance of the unit results in:
Ci = 80 nF + cable length in (m) X 0.14 nF

Installation remarks / Installation

- Adhere to the relevant national regulations and provisions.
- Avoid electrostatic charging on plastic units and cables.
- Protect the units efficiently against damage.
- The cable must be firmly laid and effectively protected against damage.
- The units are not suitable for installation in walls which separate zone 0 from zone 1.
- The relevant installation regulations (e.g. EN 60079-14) must be adhered to.
- Steps must be taken to ensure the equalisation of potential of metal parts (also fixing material).

Maintenance / Repair

The unit must not be modified nor can it be repaired. In case of a fault please contact the manufacturer.
If needed, you can obtain data sheets or EC type test certificates from the manufacturer (see cover sheet / back).